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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,882	10/20/2003	Fang-Chin Peng	2450-0571P	2053
2292 7590 01/16/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER HENN, TIMOTHY J	
			ART UNIT	PAPER NUMBER
			2622	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	01/16/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 01/16/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

**Office Action Summary**

Application No.

10/687,882

Applicant(s)

PENG, FANG-CHIN

Examiner

Timothy J. Henn

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

### ***Drawings***

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3, 6-8 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Moritaku et al. (US 6,965,463).

**[claim 1]**

Regarding claim 1, Moritaku discloses a pixel layout for a line image sensor, wherein the improvement comprises, the line image sensor being formed by a plurality of pixels being arranged in two pixel rows to raise resolution, and said two pixel rows interlacing by pixels in accordance (e.g. Figure 5, Items 61 and 62).

**[claim 2]**

Regarding claim 2, Moritaku discloses two pixel rows which are arranged in parallel (Figure 5).

**[claim 3]**

Regarding claim 3, Moritaku discloses two pixel rows which are arranged in parallel (Figure 5) and each pixel in one row is alternating with two other pixels in another row (Figure 5, Items 61 and 62).

**[claim 6]**

Regarding claim 6, Moritaku discloses a pixel layout for a line image sensor, wherein the improvement comprises, the line image sensor being formed by a plurality of pixels being arranged in more than even pixel rows (i.e. more than 2) to raise the resolution, and the pixels of the pixel rows interlacing with each other (Figure 5, Items 61-66).

**[claim 7]**

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Regarding claim 7, Moritaku discloses two pixel rows which are arranged in parallel (Figure 5).

**[claim 8]**

Regarding claim 8, Moritaku discloses two pixel rows which are arranged in parallel (Figure 5) and each pixel in one row is alternating with two other pixels in another row (Figure 5, Items 61 and 62).

**[claim 11]**

Regarding claim 11, Moritaku discloses a pixel layout for a line image sensor, wherein the improvement comprises, the line image sensor being formed by a plurality of pixels arranged in a plurality of parallel rows to raise the resolution and the plurality of parallel rows being arranged closely, and the pixels of the plurality of rows interlacing with each other (Figure 5, Items 61-66).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 5, 9, 10, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moritaku et al. (US 6,965,463).

**[claims 4, 9 and 12]**

Regarding claims 4, 9 and 12, Moritaku does not specifically disclose a line image sensor which is fabricated using CCD technology. Official Notice is taken that using CCD technology to form image sensors is notoriously well known in the art to produce image sensors with excellent sensitivity. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use CCD technology to produce the image sensor of Moritaku to produce an image sensor with excellent sensitivity.

**[claims 5, 10 and 13]**

Regarding claims 5, 10 and 13, Moritaku does not specifically disclose a line image sensor which is fabricated using CMOS technology. Official Notice is taken that using CCD technology to form image sensors is notoriously well known in the art to produce image sensors with integrated processing elements easily. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use CMOS technology to produce the image sensor of Moritaku to produce an image sensor with integrated processing elements.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- |      |        |              |
|------|--------|--------------|
| i.   | Feng   | US 6,429,953 |
| ii.  | Fukawa | US 7,002,713 |
| iii. | Spears | US 6,961,158 |

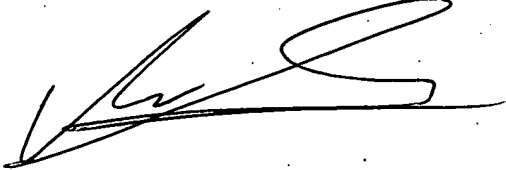
- |     |                 |              |
|-----|-----------------|--------------|
| iv. | Takayama et al. | US 5,956,087 |
| v.  | Hou             | US 6,646,682 |

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Henn whose telephone number is (571) 272-7310. The examiner can normally be reached on M-F 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571) 272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TJH  
1/3/2006



VIVEK SRIVASTAVA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600